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EXAMINER

DEMILLE, DANTON D

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3764

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 6/18/05

Application Number: 10/620,481
Filing Date: 16 July 2003
Appellant(s): Max Harry Weil, et al.

MAILED

JUN 28 2005

Group 3700

Leon D. Rosen
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 17 May 2005.

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(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct. There are no 35 U.S.C. 112 6th paragraph means plus function issues.

(6) *Grounds of Rejection to be Reviewed on Appeal*

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows:

Claims 33, 34, 37, 38, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arpin in view of Nowakowski.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 33 above, and further in view of Kelly et al. 5,738,637.

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Claims 33, 34, 37, 38, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hewson in view of Nowakowski.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hewson 3,509,899 in view of Nowakowski as applied to claim 33 above and further in view of Kelly et al. 5,738,637.

Claims 36, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 33 above and further in view of McClain et al.

Claims 41-45 are withdrawn from consideration as being drawn to a non-elected invention.

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

4,702,231	Arpin	10-1987
5,327,887	Nowakowski	7-1994
5,738,637	Kelly et al.	4-1998
3,509,899	Hewson	5-1970
2,484,306	McClain et al.	10-1949

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 33, 34 and 37-39 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Arpin in view of Nowakowski.

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Arpin teaches an energizable actuator 37 and a torso wrap 39. The actuator including a stationary frame 38, a reciprocating member 36 and means 2, 8 for cycling said reciprocating member relative to the frame. The reciprocating member is a cylinder and at least one piston part 42 slideable in said cylinder.

Arpin may not go into detail about the reciprocating piston parts however, Nowakowski teaches such details. Nowakowski teaches in figures 5, 7 and 8 that the reciprocating member includes at least two telescoping piston parts. Outer piston part 48 that is slideable within outer stationary cylinder 4 and inner piston part 61 that is slideable within outer piston part 48. As shown in the difference between figures 7 and 8, the inner piston part is slideable relative to outer piston part 48 to allow the patient to expand the chest and breath. The inner piston part 61 yields upwardly to allow the patient to breathe during a part of each cycle.

It would have been obvious to one of ordinary skill in the art to modify Arpin to provide a second inner telescoping piston part as taught by Nowakowski in order to allow the pressing member to yield upwardly to allow the patient to breathe.

Regarding claim 39, the relative size dimensions of the piston parts are well within the realm of the artisan of ordinary skill and is not critical to the operation of the device. Nowakowski teaches the second inner piston part 61 has a diameter that is at least half of the diameter of the first piston part 48. Such would have been an obvious provision in Arpin for more stable telescoping piston parts.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 33 above, and further in view of Kelly et al. 5,738,637.

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Kelly teaches column 12, lines 9-30, "to ensure that the patient's lungs are allowed to expand as much as desired, it may be necessary to include a full-release indicator with the present invention." "This indicator may include a limit switch, a magnet reed relay or contacts on the base 14 against which the arm assemblies 16 and 18 rest in their relaxed position." Furthermore, Kelly teaches "a mechanism could be added to the arm assemblies 16 and 18 for preventing the application of force to the handles 30 and 32 until full release (and return to the relaxed position) has occurred." Clearly Kelly teaches the importance of providing a means for sensing recovery of the patient's chest and making sure the cycle does not begin again until a full release position has occurred.

Kelly also teaches a control system to convert manual actuation to a computerized power unit there appears to be no unobviousness to use this limit switch sensor to sense the recovery of the patient's chest as part of the automated system to ensure a full release position has occurred so that the means for cycling begins to again move to depress the patient's chest. It would have been obvious to one of ordinary skill in the art to further modify Arpin to include the means for sensing recovery of the patient's chest as taught by Kelly in the automated system to ensure full recovery of the patient's chest in the means for cycling to control the instant at which the cycling begins as taught by Kelly.

Claims 33, 34 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hewson in view of Nowakowski.

Hewson teaches an energizable actuator 12 coupled to the patient's chest using a wrap 16 including a stationary frame 12. Hewson teaches the actuator 12 is a piston and cylinder unit.

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The details of which are unknown. Nowakowski teaches a piston and cylinder arrangement where the pressure member is biased within an outer piston part as noted above.

It would have been obvious to one of ordinary skill in the art to modify Hewson to use a telescoping piston arrangement as taught by Nowakowski in order to bias the pressing member so that the reciprocating member can yield to allow the patient to expand the chest for breathing.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hewson in view of Nowakowski as applied to claim 33 above, and further in view of Kelly et al. 5,738,637.

It would have been obvious to one of ordinary skill in the art to further modify Hewson to include the means for sensing recovery of the patient's chest as taught by Kelly in the automated system to ensure full recovery of the patient's chest in the means for cycling to control the instant at which the cycling beings as taught by Kelly.

Claims 36 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 33 above, and further in view of McClain et al.

The pressing member of McClain is pivotally attached at 60 to allow for different shapes of people and to assure the pressing member is always making complete and uniform contact with the patient. It would have been obvious to one of ordinary skill in the art to further modify either Arpin or Hewson to include a pivot connection between the piston and the pressing member as taught by McClain to assure the pressing member is always making complete and uniform contact with the patient.

(11) Response to Argument

Appellant argues that Nowakowski teaches a ventilation piston 80 the forces air out of a valve 56 and through a tube 27 to a reservoir that flows air to the patient. That Nowakowski places his air-pumping piston 80 around his chest compressing piston only to save space around his thumping piston. That this is not the same as telescoping piston parts to reduce space above the actuator and his device certainly does not provide an actuator of small height and long stroke.

While Nowakowski may teach all of the additional details, these details are not what Nowakowski is cited to teach. Nowakowski is cited to teach the convention of biasing the inner pressing member so that the patient may expand the chest to allow the patient to breathe.

During the process of applying CPR, the chest of the patient may be under constant pressure during operation of the piston. It would have been obvious to one of ordinary skill in the art to modify Arpin to include a means to biasing the inner pressing member as taught by Nowakowski so that the patient can expand the chest to breathe. While it may not teach an actuator of small height and long stroke, it does comprehend the invention as claimed.

The same would apply to the arguments of Hewson in view of Nowakowski. The issue is still that Nowakowski teaches telescoping piston parts and thereby comprehends the claimed invention.

Regarding claim 34, the relative size of the piston parts are well within the realm of the artisan of ordinary skill in order to find the optimum operating parameters through routine experimentation. It is noted that the inner second piston part 61 has a diameter that is at least half of the diameter of the first piston part 48 as shown in the figures.

Regarding claim 35, Kelly teaches devices such as limit switches that indicate when the device has reached its full release position. This indicator would be a means for sensing recovery of the patient's chest. With the device fully released there would be no pressure of the device compressing the chest and the chest of the patient would not be applying pressure to the device. Therefore the chest of the patient has recovered as claimed.

Regarding claim 36, appellant argues that the McClain arrangement cannot press against the chest of the patient above the lungs for maximum breathing, because his pressing members do not lie on his actuator vertical axis. Arpin and Hewson already teach a cylinder that has an axis that is primarily vertical when the patient's chest faces upward. McClain is merely cited to teach the convention of allowing the pressing member to pivot relative to the cylinder to accommodate for differences in contours of the patient's chest and the axis of the cylinder. The location of the pressing member on the chest of the patient may not always be perpendicular to the axis of the cylinder. McClain's pivoting pressing member allows for any variances between the axis of the cylinder and the contour of the chest of the patient. Such would have been an obvious provision in either Arpin or Hewson.

Regarding claim 37, appellant argues that figure 2 of Arpin shows that there are gaps of more than 90°. The stabilizer of Arpin is support plate 38 that includes pads 41. Appellant's specification sets forth stabilizer 130 as including top plate 134 and casing 144. The stabilizer as a whole extends completely around the actuator. The stabilizer of Arpin includes top plate 38 and casing 41 that as a whole completely extends around the actuator. The pad 41 may not extend completely around the actuator however, the stabilizer does.

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Regarding claim 38, appellant continues to argue that Nowakowski is not really relevant to telescoping pistons in a chest compressor to save vertical space while maintaining the same vertical piston stroke length. It is not clear how much weight can be given these arguments since there is no claim language that somehow sets forth this saving of vertical space function while maintaining the same vertical piston stroke length. All that is claimed is "said piston includes a plurality of telescoping piston parts including a first piston part.... and a second piston part". The rest of the claim recites how the piston parts are in a close fitting relationship and that the lower end of each piston part is lower than the piston part above it when in the lowest position. The claim merely recites a conventional telescoping hydraulic cylinder. There is nothing claimed setting forth the functions argued by appellant over the telescoping piston parts of Nowakowski.

Regarding claim 39, as noted in the above rejection, the relative sizes of the piston parts would appear to be well within the realm of the artisan of ordinary skill. There appears to be unobviousness to any specific dimensions of specific parts of the device. Moreover, Nowakowski teaches the inner piston part 61 has a diameter that is at least one-half the diameter of fitting part of the first upper piston part 48.

Regarding claim 40, as noted above, McClain teaches the pivotal connection between the axis of the cylinder and the pressing member to allow for variances between the contours of the chest of the patient and the axis of the cylinder.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

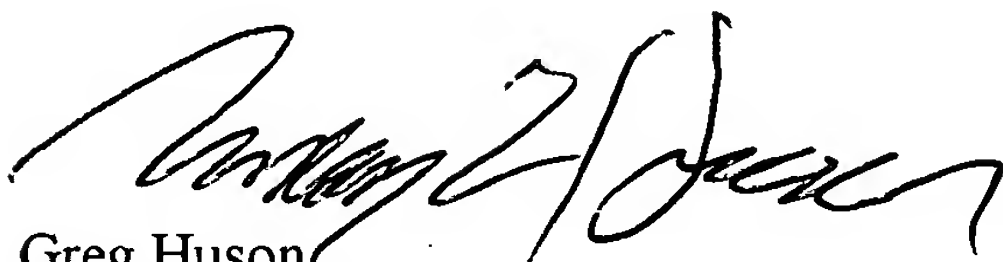


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Primary Examiner
Art Unit 3764

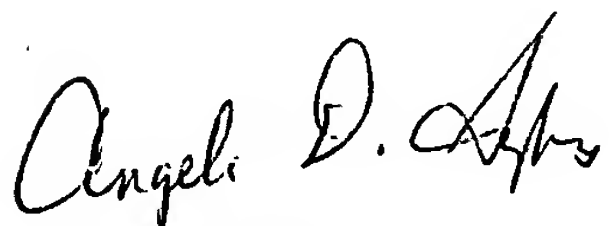
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June 20, 2005

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